



Lesson Preparation book

Computer

1st.Prep – Second Term -2024



Prepared and Designed by / جروب فريق أصدقاء الكمبيوتر المتخصص

Yasmin Shoaeb



Teacher's Biography

Name:

School:

The educational administration:

Qualification:

Teaching Subject:

Comprehensive School:

The school to which he is delegated:

Date of appointment:

The job is on the staff:

Teacher Code:

Mobile Number:

Teacher

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Supervisor

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School Principal

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Daily class schedule

| Session Day | First | Second | Third | Fourth | Fifth | Sixth | Seventh |
|-------------|-------|--------|-------|--------|-------|-------|---------|
| Saturday | | | | | | | |
| Sunday | | | | | | | |
| Monday | | | | | | | |
| Tuesday | | | | | | | |
| Wednesday | | | | | | | |
| Thursday | | | | | | | |

| Session Day | First | Second | Third | Fourth | Fifth | Sixth | Seventh |
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| Saturday | | | | | | | |
| Sunday | | | | | | | |
| Monday | | | | | | | |
| Tuesday | | | | | | | |
| Wednesday | | | | | | | |
| Thursday | | | | | | | |

Teacher

Supervisor

School Principal

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Distribution of computer and information technology

content

For 1st.Prep - 2024

Second Term



| Week | Topic | Accompanying activities |
|--|---|--|
| You must refer to the file published on the administration link on the Ministry's website to learn about the enrichment topics | | |
| 1 | The first unit: Basic concepts of programming using a program Scratch | <ul style="list-style-type: none"> → Explain theScratch program → Defines the importance of the Scratch program → Recognizes the main interface of theScratch program → Defines the work areas for theScratch program → Employs some commands related to movement and event to produce the project → Participates with his colleagues in producing his educational project(Games) |
| 2 | Use movement commands and repeat commands | <ul style="list-style-type: none"> → Uses the Repeat commandsfrom the Control group → Saves the project → Adds a NewSprite → Handles files → Uses the Control Toolbar correctly → Uses code clips inthe Script Area → Participates with his colleagues in the production stages of his educational project |
| 3 | Dealing with platform background and object appearances | <ul style="list-style-type: none"> → Dealing with theBackdrop of the Stage platform Controlling the different appearances (costumes) of objects → EmployingLooks commands in producing his project → Collaborating with his colleagues in producing his educational project → Coming up with ideas for new projects |
| 4 | Pen commands and voice playback commands | <ul style="list-style-type: none"> → Usespen blocks commands → Changes the color of the pen → Creates geometric shapes using pen commands → Deduces how to design new geometric shapes → Adds sound commandsSound Blocks to code clips → Knows how to deal with sound and make an audio recording → Uses differentevents Blocks → Compares Between differentevents |



| Week | Topic | Accompanying activities |
|------|---|--|
| 5 | Handling group events(Sensing) Conditional control commands | →Preparing game projects |
| 6 | | |
| 7 | The project | →participates with his colleagues in the production of his educational project |
| 8 | Unit Two → The Internet Basic concepts of the Internet →Some Internet services | → Defines the concept of the Internet → Distinguishes the terms of use in the Internet → Deduces the basic elements of Internet requirements → Explains the concept of a website → Recognizes the elements of a website address → Differentiates between the two concepts Upload ,Download → Enumerates some Internet services → Uses Internet services, applications, and communication programs to benefit from them In various fields → Practices the processes of publishing content and files and exchanging them via communication tools Technology (e-mail) → Discusses the impact of using modern information technology services on Different fields of study and life |
| 9 | | |
| 10 | Basic concepts of cloud computing Cloud computing services | → Defines what cloud computing is → Recognizes the main components of cloud computing → Recognizes the entry requirements for cloud computing → Searches for cloud computing services → Recognizes the benefits of cloud computing → Searches for the most famous cloud computing service providers → Explains some basic scientific concepts and terminology for technology Information and Communications → Recognizes the advantages of using information technology tools and applications And communication at the social, intellectual and educational levels → Researches how to use cloud computing services → Creates an e-mail with a suitable address → Uses one of the cloud computing services → Creates a document with the cloud computing service → Deals with the document)editing-formatting → Shares the document with colleagues |
| 11 | | |
| 12 | Safe use of the Internet | → Knows the correct sitting positions or the computer → Practices the correct sitting positions on the computer → Mentions the largest number of forms of electronic bullying via the Internet → Participates with his colleagues in raising awareness of the importance of safe use of the Internet in Our life |
| 13 | General review + practical test | |
| 14 | | |



The General Objectives of Computer

- * Providing students with the appropriate amount of scientific and basic knowledge and skills related to information technology.
- * Develop basic scientific thinking skills with a focus on modern technological skills through their interaction with the computer.
- * Training students to work in a team by practicing computer techniques.
- * Developing self-education skills in order to access the correct information by themselves through the use of computers.
- * Developing students awareness of the importance of using computers in all areas of life.
- * Students' appreciation of the role that computers play in problem solving.
- * Students familiarize themselves with the computer and deal with its programs without intimidation.
- * Developing the Egyptian personality capable of facing the challenges of the third millennium in the technology and information revolution.
- * Acquiring the right ethics and behaviors in dealing with others through the means and tools of information and communication technology.

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The specified objectives of computer

At the end of the second term the student will be able to :

- ✓ Know the main concepts and terminologies of the technology of information and communication system (Internet – Cloud-computing)
- ✓ Using the technology producing tools on supporting and developing their learn.
- ✓ Producing some projects on (Drawings and cartons) using programs and technology tools.
- ✓ To earn the skills of dealing with the program on the perfectly.
- ✓ To realize new concepts on programming.
- ✓ Using technology of communication tools on exchanging ideas and content with others.
- ✓ Using technology sources on dealing with electronic-information.
- ✓ Using electronic sources in processing data, evaluating it and preparing reports with results.

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Unit One (Scratch)

Lesson (1) Main concepts of programming using Scratch

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| Strategy | Dialogue, discussion and brainstorming |
| Teaching aids | White board – Data show – Scratch program |

Lesson objectives:

By the end of the lesson, the student should be able to:

- 1- Identify the main Interface of Scratch program.
- 2- Acquire the skill of dealing with the program in a right way.
- 3- Understand new concepts in the programming language.

Warm up:

What do you know about programming?

Lesson Presentation:

Scratch :

"Scratch" is a graphical program use in learning programming languages which seems a graphical and simple programing language which helps us in :

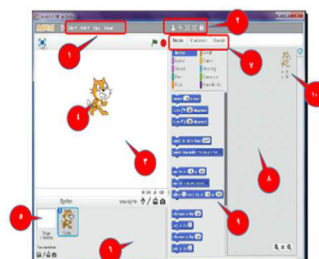
- Designing games, interaction stories and cartoons using some programming concepts.

Advantages of using Scratch :

- * Helps us in learning the main basics of programming and it's fees such as loops , conditions and identifying the sprits in a simple way.
- * A free program, and you can use it without the need of being connected to the internet.
- * Supports using Arabic language.
- * you can design a program in a simple way by constructing blocks like a puzzle.
- * Helps you to think in a creative and logical way .
- * You can use Scratch in designing some applications to use it in learning other subjects in a creative and implementation way.

Main concepts of the Scratch Interface :

- | | |
|--------------------------------------|-----------------|
| 1- Menu bar | 2- Tool bar |
| 3- Main stage | 4- Sprite |
| 5- Stage background | 6- Sprites area |
| 7- Tabs bar (Scripts–Costumes–Sound) | 9- Blocks area |
| 8- Script area | |
| 10- (X,Y) point | |



Evaluation:

Complete: One of the main advantages of using scratch



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Unit One (Scratch) Lesson (2) Main concepts of programming using Scratch(2)

Strategy

Dialogue, discussion and cooperative education

Teaching aids

White board – Data show – Scratch program

Lesson objectives:

By the end of the lesson, the student should be able to:

- 1- Differs the various block types.
- 2- Use repeat blocks commands.
- 3- Realize the importance of the sprites in the program.

Warm up:

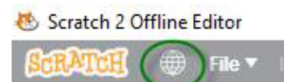
How can you control moving the sprites in the program?

Lesson Presentation:

Changing the Scratch program interface into Arabic language :

- 1- From the menu bar press the symbol in the opposite figure
- 2- Choose the Arabic language.

Work area in scratch :



1- At the top of the stage the previous symbol helps in running and stopping the program.

2- The symbol  is used in changing the stage size.

3- The part X: 55 Y: -54 shows the mouse pointer place (X,Y) on the stage.

4- The symbol  shows information about the sprite.

Scripts group:

They are different groups containing (Blocks), used in the code commands and each group is characterized by a specific color that is different from a group to another one

Motion Blocks :

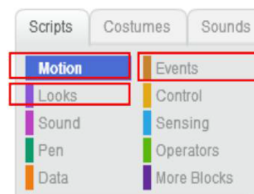
It is used in moving or rotating the sprit or determining directions on the stage.

Events Blocks :

It contains the blocks used in determining the priorities of executing events on the sprit.

Looks Blocks :

It contains blocks that control the shape and color of the sprit.



Evaluation:

Complete: blocks is used in controlling the shape and color of the sprit.



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| Strategy | Co-operative education – practical application |
| Teaching aids | White board – Data show – Scratch program |

Unit One (Scratch) Lesson (3) Using repetition and motion Blocks

Lesson objectives:

By the end of the lesson, the student should be able to:

- 1- Identify repeat blocks (commands).
- 2- Acquire the skill of saving the file in a correct way.
- 3- Recognize the importance of the sprites in the program.

Warm up:

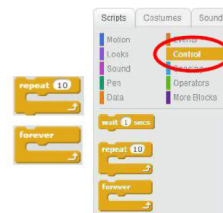
How can you add a new sprit to your project?

Lesson Presentation:

Repeat Blocks :

To repeat a command or a group of commands you can use the control blocks that contains :

- Repeat the command a specified number or times.
- To repeat the command for an infinite number of times.

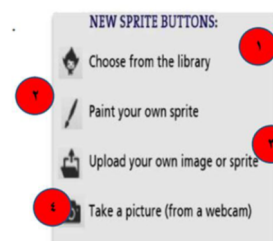


To save the project :

- From "File" menu choose "Save As"
- Choose the place to save the file on the storage media .
- Write the file's name , you will notice that the file will take the "sb2" extension.

How to add a new sprit :

- From the library.
- Drawing the sprit .
- Uploading the sprit from the storage unit.
- Taking a photo using camera.



To create a new file :

File → New

To open a saved file :

File → Open

Evaluation:

Complete: from the repeat commands,

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Unit One (Scratch) Lesson (4) Using repetition and motion Blocks (2)

Strategy

Co-operative education –
practical application

Teaching aids

White board – Data show
– Scratch program

**Lesson
objectives:**

By the end of the lesson, the student should be able to:

- 1- Use the script section in the script area.
- 2- Produce a project using the press key.
- 3- Recognize new concepts in creating a new project.

Warm up:

What is your design to create a new project?

**Lesson
Presentation:**

Dealing with code blocks :

- By clicking on the blocks with the right button of the mouse.
- From the menu choose “Repeat – Delete – add comment – Help”

Dealing with sprites on the stage :



Help Delete sprit Duplicate Sprit Maximize Minimize

**You can control the sprit directions on the stage using keyboard
arrows.**



Evaluation:

Complete: To minimize the sprit choose from the menu.

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Unit One (Scratch) Lesson (5) Stage background and the customs

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| Strategy | Discussion and practical application |
| Teaching aids | White board – Data show – Scratch program |

Lesson objectives:

By the end of the lesson, the student should be able to:

- 1- Know the new backgrounds on the stage.
- 2- Using different sprit looks in the project.
- 3- Get new ideas to the projects.

Warm up:

How can you change the background of the stage?

Lesson Presentation:

On the main interface of the Scratch program, you will see the **tab bar** and it is the most important part in the program and it is used to deal with

Scripts tab: to deal with the blocks commands and the programming area.

Sound tab: to deal with playing and recording sounds.

(Backdrops – Customs): to deal with the sprit look and the stage's background.



The stage background:

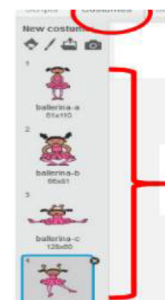
It is the image that covers the stage and is behind the sprite to add aesthetic shape and can be changed.

How to add a background to the stage:

- 1- Choose a background from the library.
- 2- Draw a background.
- 3- Upload a picture to use as a background from the storage units.
- 4- Use the camera web to take a photo

Customs tab appearance of a sprit:

It refers to the different forms of the same sprite. Each object has a set of different Costumes that display its own form of movement



Evaluation:

Put ✓ or X:

Each sprite may have more than one look ()

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Unit One (Scratch) Lesson (6) Pen Blocks

Strategy

Dialogue, discussion and brainstorming

Teaching aids

White board – Data show – Scratch program

Lesson objectives:

By the end of the lesson, the student should be able to:

- 1- Compare between different pen commands.
- 2- Draw geometric shapes using pen commands.
- 3- Understand how to design a new geometric shapes.

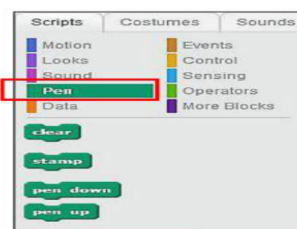
Warm up:

How can you use the pen commands to draw geometric shapes?

Lesson Presentation:

Pen blocks:

It is one of the most important commands in designing educational projects, it makes the sprite draw lines, color it during movement, and you can use it in drawing geometric shapes.



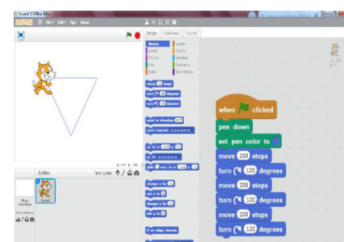
Pen blocks:

1. **pen down** Put the pen to the movement of the sprite to draw a line
2. **pen up** Lift the pen to move without drawing a line
3. **set pen color to** Assign a color to the pen and specify it inside the box
4. **clear** Erase any lines and graphics on the stage

Drawing an equilateral triangle:

To draw an equilateral triangle you must know that "the triangle consists of 3 ribs (They are straight lines), to draw the triangle:

- 1- Move the sprite (200 steps) to draw the first rib.
- 2- Draw the second rib by changing the sprite's direction (180 Degree).
- 3- Repeat the steps 3 times.



Evaluation:

Complete: One of the main advantages of using scratch

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Unit One (Scratch) Lesson (7) Sound Blocks

Strategy

Discussion and practical application

Teaching aids

White board – Data show – Scratch program

Lesson objectives:

By the end of the lesson, the student should be able to:

- 1- Compare between different events.
- 2- Deal with the sound and recorded sound.
- 3- Recognize the importance of adding a sound to the project.

Warm up:

How can you add a sound to the movement of the sprite ?

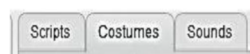
Lesson Presentation:

Sound blocks :

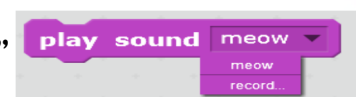
Sounds are added to the stories to add suspense, Scratch contains a set of sounds divided into categories such as rhythm effects – animal sounds and musical instruments .

To add voice commands, follow these steps:

1. Add the  command from the **sound** group



2. Click on the drop-down menu .
3. Choose from the drop-down list “**record**”
4. On the toolbar, select the “**sound**” tab play sound
5. Press the **record** key
6. Record the audio to be used
7. Press the “**Stop**” key.
8. Write the name of the file “**Square**”



Evaluation:

Complete: From the sound commands

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Unit One (Scratch) Lesson (8) Conditional control blocks

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| Strategy | Discussion and practical application |
| Teaching aids | White board – Data show – Scratch program |

Lesson objectives:

By the end of the lesson, the student should be able to:

- 1- Know sensing group blocks.
- 2- Use events with conditional control blocks.
- 3- Design a new game using conditional control blocks.

Warm up:

How can you design a simple game using conditional control blocks?

Lesson Presentation:

Sensing Blocks is used design games and get the required results.

The events associated to control blocks:

- * Using it as a condition to get a required result for the project.
- * Associating executing the programmatic clip by clicking on the mouse button or clicking one of the keyboard buttons and associating executing the commands with the mouse click. Do not use the sensing blocks alone.

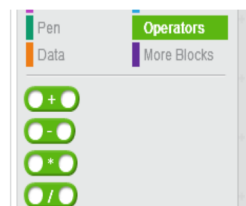
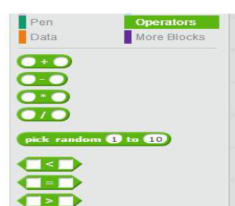
How to use conditional control commands with sensing collection events:

Collection events are placed inside the conditional control segment and then choose the type of event associated with the condition

Use some operations with operators blocks:

There are many operations within the operators group such as

1. Arithmetic operations (addition and subtraction.)
2. Comparison operations (greater than and less than..)



Evaluation:

Complete: Sensing blocks is used to



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Unit One (Scratch)

Lesson (9) Project

Strategy

Discussion and practical application

Teaching aids

White board – Data show – Scratch program

Lesson objectives:

By the end of the lesson, the student should be able to:

- 1- **Know** the needed commands for the project.
- 2- **Design** a project using Scratch.
- 3- **Recognize** the importance of the program in designing cartoon.

Warm up:

Can you design a project with your friends?

Lesson Presentation:

First project : Stoplight :

- * Drawing a stoplight (Sprite)
- * Designing more than one look for the sprite with the three lights
- * Put a suitable background for your project.
- * Running the programming commands .





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Unit Two (Internet)

Lesson (1) Basic concepts of the internet

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| Strategy | Dialogue, discussion and brainstorming |
| Teaching aids | White board – Data show – Scratch program |

Lesson objectives:

By the end of the lesson, the student should be able to:

- 1- Identify the internet definition.
- 2- Characterizes using the internet concepts.
- 3- Understand the importance of the internet.

Warm up:

What do you know about Internet?

Lesson Presentation:

Internet:

A network consisting of a group of connected networks and each network consists of connected computers, communication lines and equipment.

Internet connection requirements:

- 1- A computer with a graphics card "installed"
- 2- Internet service provider .
- 3- Internet browser like "Internet Explorer"

Protocol:

It is a set of procedures that directs the computer to the rules that must be followed to communicate with other computers.

The most famous of them are:

TCP/IP protocol

(Transmission Control Protocol)

It is the protocol responsible for making sure of the authenticity of transferring data between computers.

(Internet Protocol)

It is the protocol responsible for transferring data between computers.

FTP protocol (File Transfer Protocol)

It is the protocol responsible for exchanging files through the internet.

Evaluation:

Complete: internet is

Prepared and Designed by/ Yasmin Shoaeb جروب فريق أصدقاء الكمبيوتر المتخصص



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Unit Two (Internet) Lesson (2) Basic concepts of the internet

Strategy

Discussion and cooperating learning

Teaching aids

White board – Data show – Scratch program

Lesson objectives:

By the end of the lesson, the student should be able to:

- 1- Identify the definition of website.
- 2- Recognize the main elements of the website.
- 3- Differentiates between Download-Upload.

Warm up:

What is the website?

Lesson Presentation:

Website :

It is a webpage or more linked together with a special name and stored on the Web server and has a URL.

Uniform Resource Locator :

You can visit the website through your computer or the mobile , **and the**

URL main elements are :

http: specifies the protocol type.

Moe: specifies the web server "computer name"

www: World Wide Web

gov: specifies the organization

eg: specifies the country

web page :

It is an electronic document published on the internet and displayed through the browser.

Home page :

It is the first page on the website , through which the rest of pages are navigated .

Hyperlink :

It is a text or picture connected to an address when clicked a link is taken to that address.



Upload



Download

Evaluation:

Complete: From the URL elements,



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Unit Two (Internet) Lesson (3) Internet Services

Strategy

Dialogue, discussion and brainstorming

Teaching aids

White board – Data show – Scratch program

Lesson objectives:

By the end of the lesson, the student should be able to:

- 1- Identify the internet services.
- 2- Acquire the skill of dealing with the internet in a right way.
- 3- Recognize the importance of using Internet.

Warm up:

What are the uses of the internet?

Lesson Presentation:

- 1- **Internet search service:** This service is done through what is called search engines such as Google and Bing, which provide the researcher with information.
- 2- **Mailing List Service :** It is a list of e-mail addresses used to transfer any message to a group of people, and each list has its own address.
- 3- **FTP File Transfer Service:** It is a service provided by the Internet to transfer files over it. This allows people to easily share files over the Internet.
- 4- **News Group:** It is a place on the Internet where people meet to exchange ideas and opinions on a specific topic.
- 5- **Chat service:** It is an online program that brings together users from around the world to talk to each other at the same time by writing or voice and image.
- 6- **Social media sites:** in which social news is exchanged between a group of Individuals.
- 7- **Online shopping service:** It is a service provided by some websites that enables you to buy and sell online
- 8- **E-mail service:** used to exchange various electronic messages.
- 9- **Web Service:** Using the World Wide Web and browsing the content of various websites.

Evaluation:

Put ✓ or X: E-commerce : It is a service provided by some websites that enables you to buy and sell online ()



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Unit Two (Internet) Lesson (4) Cloud computing

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| Strategy | Cooperative learning and brainstorming |
| Teaching aids | White board – Data show – Scratch program |

Lesson objectives:

By the end of the lesson, the student should be able to:

- 1- Identify what is cloud computing.
- 2- Mention the cloud computing components.
- 3- Recognize the importance of computing components.

Warm up:

What are the cloud computing?

Lesson Presentation:

Cloud computing:

- It is an advanced technology that relies on transferring the processing and storage space of a computer to what is called the cloud.
- It is a server device that is accessed and used via the Internet.
- It is a new concept for exchanging the electronic sources in the aim of producing

Cloud Computing Components:

- Software or services: They are the application that the user need like :Word ,Excel
- Platform :It is the way to save and store files and accessing databases and organizing it to be
- Infrastructure: It contains hardware like servers and storage units.

Cloud computing entry requirements:

- A computer connected to the Internet
- Operating system
- Internet browsing program
- Cloud computing service provider



Evaluation

Mention what you know about the requirements for entering cloud computing?

Evaluation:

Put ✓ or X: Cloud computing is the technology depends on transferring data and storage space on your computer and it is called cloud ()



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| Strategy | Dialogue, discussion and Cooperative learning |
| Teaching aids | White board – Data show – Scratch program |

Unit Two (Internet) Lesson (5) Cloud computing 2

Lesson objectives:

By the end of the lesson, the student should be able to:

- 1- Mention cloud computing importance.
- 2- Acquire the cloud computing advantages.
- 3- Recognize the importance of computing advantages.

Warm up:

What is the cloud computing?

Lesson Presentation:

Cloud computing services:

- E-mail
- Cloud storage
- Cloud music
- Cloud applications

Benefits of cloud computing:

- You can deal with your data through a device connected to the internet.
- Low cost.
- Versatility.
- The service provider company is responsible for repairing any errors.
- Sharing resources.
- Reducing material cost.



The most famous computing service providers:



Evaluation:

Complete: From the cloud computing benefits

| | | | | |
|---------|--|--|--|--|
| Date | | | | |
| Session | | | | |
| Class | | | | |



Unit Two (Internet) Lesson (6) Internet safety

| | |
|---------------|---|
| Strategy | Dialogue, discussion and cooperative learning |
| Teaching aids | White board – Data show – Scratch program |

Lesson objectives:

By the end of the lesson, the student should be able to:
 1- **Identify** the correct seating in front of the computer.
 2- **Practice** the correct seating in front of the computer.
 3- **Recognize** the importance of Internet safety.

Warm up:

What are the disadvantages of using internet?

Lesson Presentation:

Internet safety: we depend on using technology as an important communication and we spend a lot of time using computers and we must know more about internet safety.

Correct sitting in front of the computer:

1. Avoid staying in a sitting position for a long time and keep your head straight.
2. The office should be close to you, while avoiding placing the telephone headset between the shoulder and the head.
3. Avoid exposing the neck to air currents. Close computer screen between working hours.
4. The screen should be placed at the level of the user's nose while maintaining the weight.



Cyber Bullying: It means any departure from politeness and morals in chatrooms or instant messages, and its forms are:

1. **Happy slapping**
2. **Phishing**
3. **Contempt**
4. **Spam messages**



firewall:

It means hardware and software that prevents unauthorized access to certain sites that may be immoral or immoral.

Evaluation:

Complete: from the cyber bullying forms

